

A MODEL OF INFLUENTIAL FACTORS FOR ONLINE PURCHASE INTENTION: AN EMPIRICAL STUDY IN UGANDA

N.S. Jannat¹, M.S Habib² and B.M. Nura³

¹Faculty of Computer and Information Technology, Al-Madinah International University, Malaysia (MEDIU). jannat@gmail.com

²Faculty of Computer and Information Technology, Al-Madinah International University, Malaysia (MEDIU). mahmudhabibshariff@gmail.com

³Department of office Technology and Management, School of Management Studies, Kano State polytechnic, nabnurtrn@gmail.com

Abstract

Adoption of online purchasing in Uganda is observed to be low irrespective of the fact that it is on its rise globally. Online stores are gradually emerging though continue to make low sales. Majority of the customers still choose to purchase from physical sell points thus continue to encounter challenges including time wastage in long queues, traffic jam, inconvenience attributable to movements from one shopping store to another, extra costs on transport and limited product selection. The Ugandan government too continues to miss out on boosting economic and social development because of failure of its population to fully embrace e-commerce. Irrespective of the above challenges, research on influential factors for customer online purchase in Uganda remains scarce. This study aims at identifying key factors that influence customer intention to purchase online and determining the effect of the different factors on online purchase intention (OPI) in Ugandan context. A model of influential factors for online purchase intention will then be developed and validated.

Keywords: e- commerce, online purchase, information and communication technology

1.1 Background of the Study

The advent of internet transformed the way businesses sell and how consumers buy goods and services. The process of purchasing, selling, transferring, serving, or exchanging products, services, or information via computer networks including the internet is termed as e-commerce (Turban et al., 2008). E-commerce is a driver of economic growth for both developed and developing countries. Businesses that have successfully embraced e-commerce have achieved increased sales, business efficiency, attained competitive advantage, increased automation of processes, retained and increased customer base. Buyers on the other hand find online purchasing convenient, time saving, offering a wide variety of selection, lower price items as well as making private purchases easier. Beyond that, e-commerce contributes to the development and growth of the global economy both developed and developing nations. Unfortunately, a number of developing countries have not fully embraced e-commerce to reap its full potential. Consequently, such countries continue to miss out on boosting economic and social development because of failure to embrace e-commerce.

Online Purchasing, a component of e-commerce refers to buying of products and services over computer networks (Kumari & Mishra, 2015). Online Purchasing exhibits a rise in growth globally though it is in its initial stages in many developing countries (Zhou et al., 2007; Alyoubi, 2015). In Uganda, several customers in Uganda still prefer visiting traditional stores, shops, shopping malls to physically make purchases irrespective of challenges that accompany this mode of purchasing. Customers who purchase items from physical sell points encounter challenges including inconveniences, time wastage in long queues, traffic jam as well as movements from one shopping store to another, extra costs on transport and limited product selection. The number of online buyers in Uganda is still very small compared to the entire population or total internet users. The case is actually worse off in rural regions as compared to the urban centers. Customers in urban areas usually have required facilities and some knowledge about e-shopping thus easily embrace it while those from rural areas underdeveloped ICT infrastructure, perceive e-shopping as difficult to use and as a result have been slow in accepting it (Weltevreden & van Rietbergen, 2009). Similarly, in the Ugandan setting, the latter lags behind to a significant extent.

Several researches including Aldhmour & Sarayrah (2016), Makwana et al., (2015); Zarrad & Debabi (2012) have been done to explain influential factors for online purchase intention (OPI) and in other studies models developed Aziz & Wahid (2018); Ijaz & Rhee's Model (2018); Zhou et al. (2007); explaining factors that influence customer online purchase however majority of them have been developed in country contexts which may actually differ from the Ugandan context. It is however important to note that developing a model from a different country for example in a developed country setting and applying it directly in another country may not actually work well because of factors including divergence in culture, social-economic conditions, values and preferences.

1.2 Research Questions

1. What factors influence online purchase intention in Uganda?
2. What is the effect of the influential factors for online purchase on intention to purchase?
3. What model supports influential factors for online purchase intention in Uganda?
4. How can the model of influential factors for online purchase intention be validated?

1.3 Research Objective

To develop a model of influential factors for online purchase intention in Uganda

1.3.1 Specific Objectives

1. To determine influential factors for online purchase intention in Uganda.
2. To determine the effect of the influential factors for online purchase on intention to purchase.
3. To design a model for influential factors for online purchase intention in Uganda.
4. To validate the model for factors influencing online purchase intention in Uganda.

Literature Review

2.1 Introduction

This chapter reviews literature about Uganda, online purchase in and outside Uganda, payment modes, reasons for consumer purchase online, factors impeding OP, a review of models and evaluation of models is made and finally a conceptual model of influential factors for OPI is presented.

2.2 Uganda

According to the 2019 Least Developed Countries Report, Uganda is listed by the United Nations amongst the least developed countries (LDCs). It is located in Eastern Africa with an estimated population of 45,741,007 people by 2020. The country is made up of 4 regions, namely; Northern region, Eastern region, Central region and Western region.



Figure 2.1: Regions in Uganda

The country is further divided up to make a total of 112 districts.

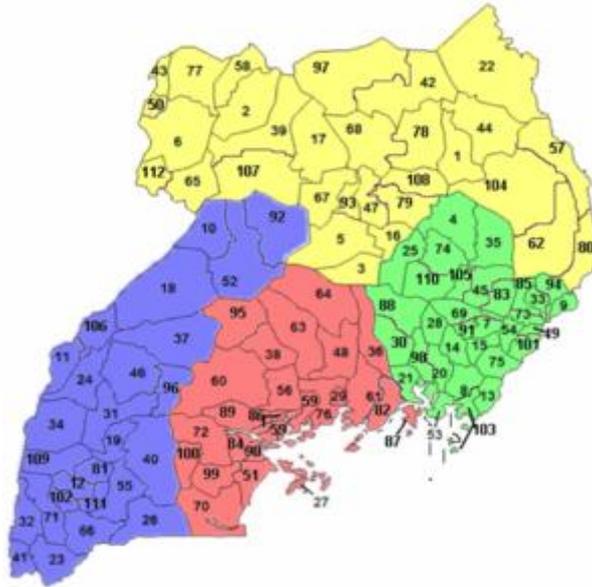


Figure 2.2: Districts in Uganda

2.3 Offline Shopping

This is the traditional way of buying products or services physically from the vendor, store or shop. This mode of purchasing allows customers to purchase items after physically seeing, touching or trying on a product. Customers in this case do not require an internet connection, closely examine a product to ensure it meets their expectations, hold possession of an item on making payment thereby avoiding risks like internet fraud. Purchasing offline however has limitations including the method being slow, time consuming, inconveniencing, expensive and providing a limited product selection.

2.4 Online Purchasing

Online Purchase is a form of electronic commerce which allows customers to buy goods or services from a seller over the internet without any intermediary (Aldmour & Sarayrah, 2016).

2.4.1 Online Purchasing within Uganda

Online shopping in Uganda is still in its initial stages. Majority of the customers still prefer moving and buying products or services physically from traditional shops, shopping malls, trading centers and stores rather than shopping online (National Information Technology Survey 2017/18 Report) (CIPESA, 2018). The case is not any different even with the urban population who have increased access to smart phones and internet services (Mbabazi, 2018). This may be attributed to reasons including lack of awareness, negative perceptions, mistrust in the e-shopping system, behavioral controls and subjective norms.

Adoption of e-commerce has generally been slow in Uganda. According to the National Information Technology Survey 2017/18 Report (CIPESA, 2018), 0.3% of Ugandans had ever sold a good/ service online. However, some customers and businesses have embraced e-commerce. A few online stores are presently operating in Uganda, these include JumiaFood, Kikuubo Online, Home Duuka, Takeway Ug, Jumia travel, Jumia market Twaha (2016). These offer a wide selection of products including but not limited to electronics, fashion items, home appliances, online food delivery service, mobile phones and accessories. Online ordering and payment for services including travel, education, training and consultancy are also in existence. Safe Boda and Uber are examples of local online service providers with

applications enabling customers to order and pay for transport services online. Their services were highly embraced with reasons attributed to offering low service charges as well as quick service delivery. Similarly, some bus companies enable their customers to book seats and pay for tickets online. Whereas some online stores remain operational, several others have not been successful which has led to their closure. The failure of online stores is attributed to their inability to attract online buyers. Important to note is that 81.5% of online purchases happened within Uganda National Information Technology Survey 2017/18 Report (CIPESA, 2018).

Methodology

3.1 Introduction

Here the research methodology is presented as reviewed in the research onion process by Saunders et al. (2019). The study presents the research philosophy, research approach, research strategy, research methods, time horizons, research scope (study area, study population, sample size), data collection methods and instruments, data analysis techniques, model development and validation tools that will be used in the research.

3.2 The Research Onion Process

To properly structure the research methodology, this research was guided by a step by step guide to structuring research methodology by Saunders et al. (2019).

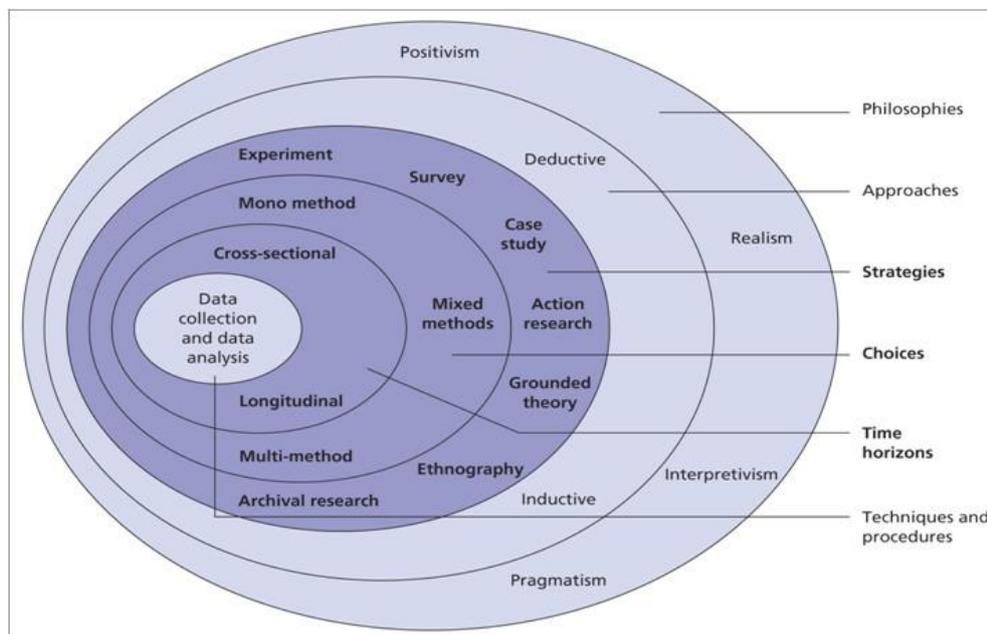


Figure 3.1: The Research Onion (Source: Saunders et al. 2019)

3.2.1 Research Process

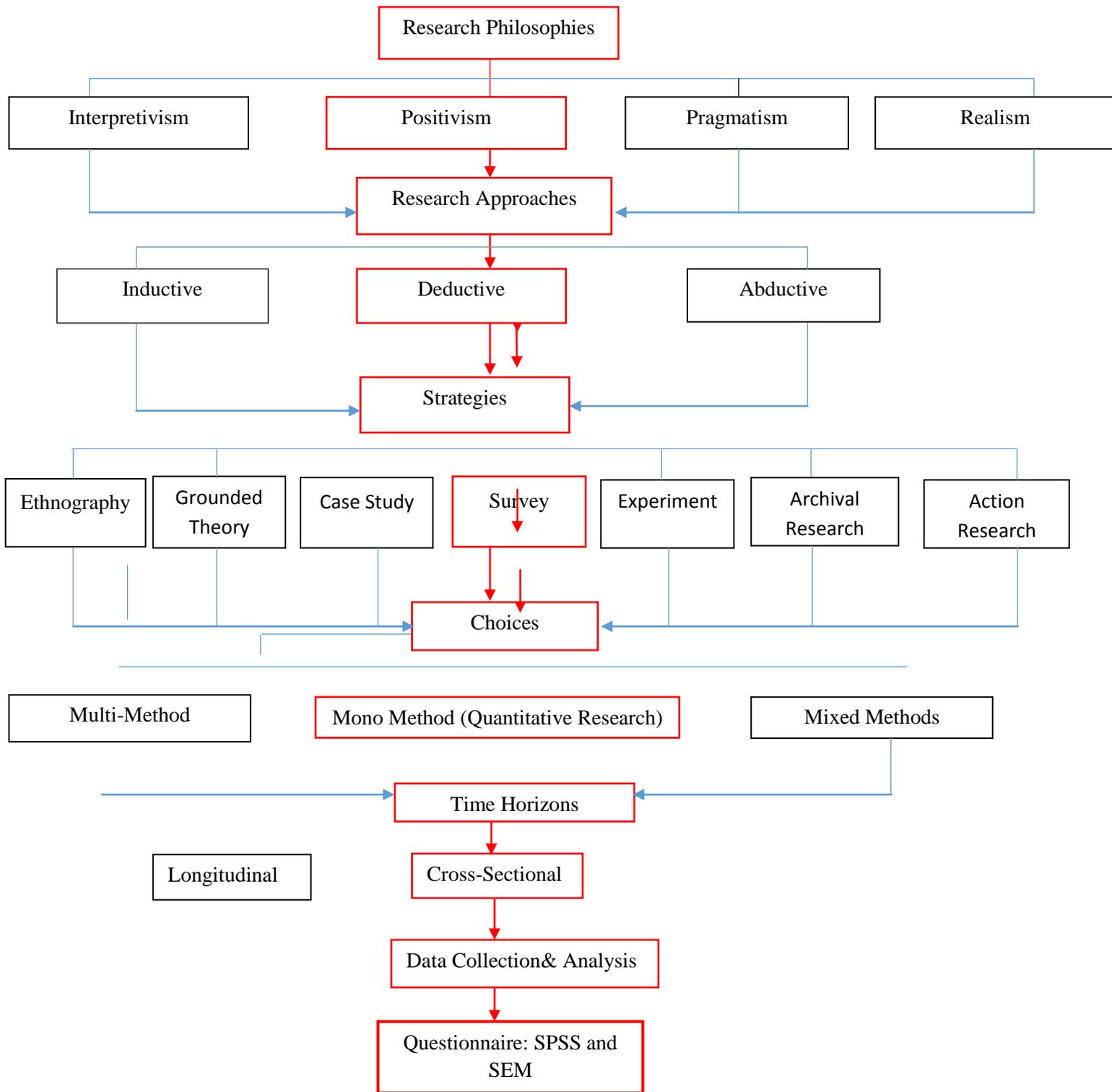


Figure 3.2: Proposed Research Process

3.2.2 Steps of the Research Process

The main activities of this research study include identifying the general study area, problem identification, reviewing literature, developing research questions and hypotheses, proposing a conceptual model, collecting, analysing data, developing, validating the model and presenting findings as indicated in figure 3.3 below.

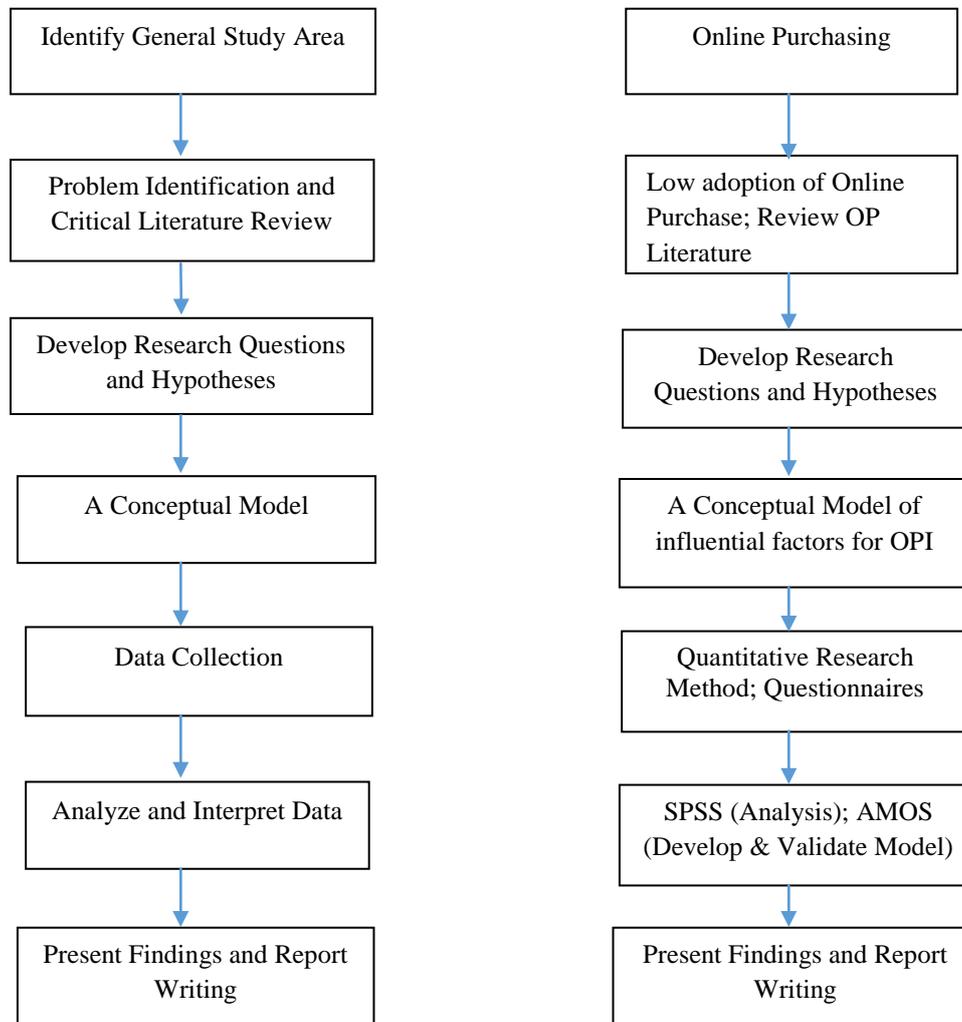


Figure 3.3: Overview of steps to be followed in the Research study

Data Collection

Data Sources

This study will review secondary sources of data majorly documents (literature) of published journal articles and primary sources particularly self-administered questionnaires to collect data. Research studies on online purchase, benefits of OP, factors impeding OP and an evaluation of existing models will be done.

Cross-Sectional Study

A research study will be done in which data will be collected and analyzed for a period of 4 months. This method is preferred because it is inexpensive and allows collecting a great deal of information quite quickly.

Questionnaire

Questionnaires will be used as data collection tools. A questionnaire is a survey instrument that enables a researcher to collect a variety of data that gives the researcher information about a sample of people, usually with a view of generalizing to a wider population.

Questionnaires will be used because they are cost effective, require lesser effort yet have a high response rate (Tolonen, 2005). Questionnaires also have standardized responses that make it easy for data analysis (Kabir, 2016).

Questionnaire Design

A number of questions will be adapted from previous research while several others were self-developed to address concepts specific to the purpose of this research. Questions will be phrased in a way that avoids influencing answers. The questionnaire will be examined and pre-tested by the researcher to free it from any mistakes and clarity.

Validity and Reliability

Validity and reliability tests will be performed.

Validity is “the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform” (Cronbach, 1988). Content and Construct validity tests will be done to ensure validity of the research instrument. To ensure that content validity is achieved, lot of attention will be given to words used to capture accurate, relevant and unbiased information. The questionnaire will be given to some professionals including my supervisor. A pre-test on 10 interviewees will be carried out. Interviewees will be requested to highlight areas that require improvement in the questionnaire. Following that initial test improvements will be made and a new version of the questionnaire will be tested on 10 other interviewees to ensure a valid research instrument. Construct Validity will also be computed to verify relevance of questions in the questionnaire.

Reliability measures internal consistency of the research instrument to determine if it consistently measures what it is intended to measure (Cronbach, 1988). Cronbach’s Alpha test and Composite Reliability will be done to check if the research instrument is accurate and consistent.

Pilot Study

Data will be recorded using a 5 Likert scale structured questionnaire with close ended questions. According to Saunders et al., (2007), before using a questionnaire to collect data it should be pilot tested. The aim of the pilot study is to refine the questionnaire and free it of any mistakes so that future respondents have no challenges in answering questions and that there are no problems in capturing of data. According to Zikmund et al. (2013), the pilot study sample size should be 1-1.5% of the sample size to be used in study. Cooper & Schindler (2014) opined that a pilot study can comprise of between 25 to 100 respondents. A pilot study will thus initially be carried out in which 30 questionnaires will be issued to test for the questionnaire validity.

Target Population

Individual customers and business operators purchasing items from suppliers/ manufactures in and outside of Uganda will be identified and questionnaires will be issued to them.

2.0 Discussion and analysis of results

Analysis of Variance

In order to determine whether the data that was used in the study was significant, ANOVA was performed. The findings from ANOVA analysis showed that the population parameters had a p-value of 0.001. This suggests that the data was suitable for making conclusion on the population under investigation because the p-value was less than 0.05.

	Model	Sum of Squares	df	Mean Square	Sig.	F
1	Regression	37.237	3	12.412	98.102	.001 ^b
	Residual	33.782	267	0.127		
	Total	71.019	270			

Table 4.1: Analysis of variance

The F critical was less than F calculated ($2.638 < 98.102$). This shows that data used in the study was significant.

Discussions of result

It was found out that personal characteristics is statistically significant to choices of online purchase in Uganda as shown by ($\beta = 0.231$, $P = 0.006$). This suggests that at 95% confidence level, personal characteristics had significant positive relationship with choices of online purchase in Uganda. This suggests that increasing personal characteristics by a single unit would lead to an increase in choices of online purchases in Uganda. Consumer attitudes is statistically significant to choices of online purchase in Uganda as shown by ($\beta = 0.213$, $P = 0.005$). This suggests that at 95% confidence level, consumer attitudes had significant positive relationship with choices of online purchase in Uganda. This suggests that increasing consumer attitudes by a single unit would lead to an increase in choices of online merchants in Uganda.

Convenience is statistically significant to choices of online purchase in Uganda as shown by ($\beta = 0.209$, $P = 0.005$). This suggests that at 95% confidence level, convenience had significant positive relationship with choices of online purchase in Uganda.

This suggests that increasing convenience by a single unit would lead to an increase in choices of online purchase in Uganda.

Conclusion and Recommendations

The proposed model suggests additional factors including; Facilitating Conditions (FC), System Quality (SQ) and Service Quality (SeQ). Perceived usefulness in the TAM model was replaced by perceived benefits to capture other advantages of online purchase including product variety, convenience and product attributes and product cost. Normative beliefs were replaced by subjective norms to capture both social influence and normative beliefs. Additional factors included: demographic factors and attitude since they were found to significantly impact on online purchase intention in several literature including the OSAM. Trust; which is considered a major concern in customer online purchase studies was addressed by introducing the system quality construct.

The research sought to determine the influential factors for online purchase intention in Uganda. The research found that customers choose to shop online because they can purchase products needed for their families, the products are sold at fair prices and it is easy to buy

products online. The study concludes that personal characteristics influence the choices of online merchants.

The study found that customers prefer to purchase merchants online when the information provided is clear to them, they get access to whatever products they need and it's delivered to them. They are able to compare different products and there is an easy way of paying for the products.

The study found that personal characteristics affect the choices of online purchase in Uganda. It is therefore, recommended that the online store should consider the customer's personal characteristics and incorporate them in their shopping platform in order to cater for all the needs of different customers and therefore increase their satisfaction and in return increase their loyalty which in return increases the shops sales volume and in return increasing their profitability.

It is also suggested that online shops/retailers should develop various risk-reducing strategies and also conduct campaigns to educate customers on online shopping. This will increase their customer base.

Online shops should put mechanisms in place to guarantee the quality of their merchandise and create avenues of settling disputes while making exchanges of products. Also, safe and reliable courier services should be used to ensure that products ordered online are received by the customers.

The study found that ordering and transaction procedures that are safe and easy to use is what motivates customers to make online purchase. The study therefore recommends that the online stores should focus on making the processes much easier, secure and efficient to lure more customers.

References

- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Akam M. & Muller M. (2013), Supplier management in developing countries, *Journal of Cleaner Production*, Vol. 56, pp. 54-62.
- Akroush, M.N., & Al-Debei, M.M. (2015). An integrated model of factors affecting consumer attitudes towards online shopping. *Business Process Management Journal*, 21(6), 1353-1376.
- Al-Debei, M. M., Akroush, M. N., & Ashouri, M. I. (2015). Consumer attitudes towards online shopping: The effects of trust, perceived benefits, and perceived web quality. *Internet Research*, 25(5), 707-733
- Al-Maghrabi, T. & Dennis, C. (2011). What Drives Consumers' Continuance Intention To E-Shopping?, *International Journal Of Retail & Distribution Management*, 39(12):899-926.
- Aldhmour, F., & Sarayrah, I. (2016). An investigation of factors influencing consumers' intention to use online shopping: An empirical study in South of Jordan. *Journal of Internet Banking and Commerce*, 21(2),1-48.
- Alyoubi A. A. (2015). E-commerce in Developing Countries and How to Develop Them During the Introduction of Modern Systems. *Procedia Computer Sciences* 65 479-483
- Athapaththu, J.C. and Kulathunga, D. (2018). Factors Affecting Online Purchase Intention: Effects of Technology and Social Commerce, *International Business Research*, 11(10), 111-128.
- Aziz, N. N. A., & Wahid, N. A. (2018). Factors Influencing Online Purchase Intention among University Students. *International Journal of Academic Research in Business and Social Sciences*, 8(7), 702- 717.
- Bagchi, K. and Mahmood, M. A. (2004). A Longitudinal Study of Business Model of On-Line Shopping Behavior Using a Latent Growth Curve Approach. *Proceedings of the Tenth Americas Conference on Information Systems*, New York.
- Bryman, A. (2001). *Social Research Methods*. New York: Oxford University Press.
- Burke, R.R. (2002). Technology and the customer interface: what consumers want in the physical and virtual store, *Journal of the Academy of Marketing Science*, 30(4), 411-32.
- Butt, H.A., Shah, A.B.A., Iqbal, H. (2016). Perceived Service Quality and Purchase Intention: Mediation of Word of Mouth. *Journal of Business Management and Economic Studies*. 1(2),1-13.
- Carson, D.J., Gilmore, A., Perry, C. and Gronhaug, K. (2001), *Qualitative Marketing Research*, Sage, London.
- Chen, R. and He, F. (2003). Examination of brand knowledge, perceived risk and consumers' intention to adopt an online retailer, *Total Quality Management & Business Excellence*, 14(6), 677.
- Chen, C.C., Chen, C.W. and Tung, Y.C. (2018). Exploring the Consumer Behavior of Intention to Purchase Green Products in Belt and Road Countries: An Empirical Analysis, *Sustainability* 10(3):854
- Chiaburu, D.S. and Tekleab, A.G. (2005) Individual and Contextual Influences on Multiple Dimensions of Training Effectiveness. *Journal of European Industrial Training*, 29, 604-626.
- Childers, T.L., Carr, C.L., Peck, J. and Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior, *Journal of Retailing*, 77(4), 511-535.

- Cho, J. (2004). "Likelihood To Abort An Online Transaction: Influences From Cognitive Evaluations, Attitudes, and Behavioral Variables," *Information & Management* Vol. 41, 827-838.
- Cho, Y., Im, I., Hiltz, R., and Fjermestad, J. (2001). Causes and outcomes of online customer complaining behavior: implications for customer relationship management (CRM), *Proceedings of the 7th Americas Conference on Information Systems*, 900-907.
- Chuttur, M. (2009). Overview of the Technology Acceptance Model: Origins, developments and future directions. *Working Papers on Information Systems*, 9-37.